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EXAMINER	
DARNO, PATRICK A	

ART UNIT	PAPER NUMBER
2163	

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/787,477	DETTINGER ET AL.	
	Examiner	Art Unit	
	Patrick A. Darno	2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10282004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-30 are pending in this office action.

Specification

1. The disclosure of the invention is objected to because:

- The disclosure appears to be directed to non-statutory subject manner. The specific subject matter in question is the subject matter the Applicant considers to be computer readable medium. In paragraph [0022], the Applicant states that the computer readable medium for which the computer program of the invention can be embodied is a "signal bearing medium". Furthermore, the Applicant states that a computer readable "signal bearing medium" includes information conveyed through a communications network. This type of communication medium or transmission medium is not accepted by the USPTO as an appropriate computer readable medium. Furthermore, the Examiner interprets paragraph [0022], lines 12-19 as leaving open the possibility that the Applicant considers 'signal bearing medium' to also include some form of carrier wave because the Applicant states that 'information downloaded from the Internet and other networks" is also part of the 'communications medium'. While this may be a broad interpretation of the wording used by the Applicant, the Examiner is issuing this objection as a precaution to ensure that the Applicant's invention is only directed to what the USPTO considers appropriate computer readable medium. In order to over come this objection the Applicant must first amend the specification to remove

the possibility that the computer readable medium could include a form of carrier wave, communications medium, or transmission medium. Further, it is required that the Applicant positively disavow all embodiments where the computer readable medium is a form of carrier wave, communications medium, or transmission medium. These corrections are required in order to overcome this objection.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 18-26 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 18 is rejected under 35 U.S.C 101 for being directed toward non-statutory subject matter. It appears that the computer readable medium that is claimed by the applicant is not an acceptable, patentable computer readable medium. In paragraph [0022], the Applicant states that the computer readable medium for which the computer program of the invention can be embodied is a "signal bearing medium". Furthermore, the Applicant states that a computer readable "signal bearing medium" includes information conveyed through a communications network. This type of communication medium or transmission medium is not accepted by the USPTO as an appropriate computer readable medium. Furthermore, the Examiner interprets paragraph [0022], lines 12-19 as leaving open the possibility that the Applicant considers 'signal bearing medium' to also include some form of carrier wave because the Applicant states that

'information downloaded from the Internet and other networks" is also part of the 'communications medium'. While this may be a broad interpretation of the wording used by the Applicant, the Examiner is issuing this rejection as a precaution to ensure that the Applicant's invention is only directed to what the USPTO considers appropriate computer readable medium. In order to over come this rejection the Applicant must first amend the specification to remove the possibility that the computer readable medium could include a form of carrier wave, communications medium, or transmission medium. Further, it is required that the Applicant positively disavow all embodiments where the computer readable medium is a form of carrier wave, communications medium, or transmission medium. These corrections are required in order to overcome this objection.

Claims 19-26 are rejected because they either contain or inherit the deficiencies of claim 18.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 6,366,915 issued to Amy Rubert et al. (hereinafter "Rubert") in further view of U.S. Patent Application Publication Number 2003/0172082 issued to Jeffrey Benoit et al. (hereinafter "Benoit").

Claim 1:

Rubert discloses a computer-implemented method for scheduling execution of units of work, comprising:

determining a cost to execute a unit of work (Rubert: column 14, lines 4-14; The Rubert reference clearly shows determining if a query is a 'high-impact query'. This involves calculating the 'cost' of a query. Furthermore it should be known for the record that the Applicant clearly stated that determining the 'cost' of a query is well known in the art in paragraph [0034] of the Applicant's specification.);

determining a plurality of scheduling options for future execution of the unit of work on the basis of the cost (Rubert: column 10, lines 57-67; Note particularly that future scheduling is based on how high the cost (high impact = high cost) of a query is.).

Rubert does not explicitly disclose wherein the query scheduling options are user-selectable; and returning the plurality of user-selectable scheduling options to a user interface for display to a user. However, Benoit discloses wherein the query scheduling options are user-selectable (Benoit: paragraph [0016], lines 3-5 and paragraph [0045] and Fig. 9); and returning the plurality of user-selectable scheduling options to a user interface for display to a user (Benoit: Fig. 9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Rubert with the teachings of Benoit noted above. The skilled artisan would have been motivated to improve the teachings of Rubert per the above such that a user interface provides the user with flexibility to set saved queries to execute at a scheduled time interval (Benoit: paragraph [0016], lines 1-5 and Fig. 9).

Claim 2:

The combination of Rubert and Benoit discloses all the elements of claim 1, as noted above, and Rubert further discloses wherein the unit of work is a query (Rubert: column 2, lines 57-61).

Claim 3:

The combination of Rubert and Benoit discloses all the elements of claim 1, as noted above, and Rubert further discloses wherein the unit of work is an analysis routine (Rubert: column 2, lines 57-61; A query is an analysis routine. The Applicant clearly defines an analysis routing in paragraph [0026], lines 29-32 of the Applicant's Specification. This definition states that an analysis routine is "any unit of work performed with respect to the data in the database". Surely a query is a unit of work performed with respect to the data in the database.).

Claim 4:

The combination of Rubert and Benoit discloses all the elements of claim 1, as noted above, and Benoit further discloses displaying the returned plurality of user-selectable scheduling options to user via a menu in the user interface (Benoit: Fig. 9, 904).

Claim 5:

The combination of Rubert and Benoit discloses all the elements of claim 1, as noted above, and Benoit further discloses:

receiving a user selection from the plurality of user-selectable scheduling options (Benoit: paragraph [0045] and Fig. 9, 904; Note specifically "execute automatically at a frequency set by the user". Surely there is some means to receive a user selection is the user uses the interface menu to 'set' a schedule of execution of a query.); and

storing a schedule for the unit of work on the basis of the user selection (Benoit: paragraph [0045], lines 1-3).

Claim 6:

The combination of Rubert and Benoit discloses all the elements of claim 1, as noted above, and Benoit further discloses:

receiving a user selection from the plurality of user selectable scheduling options (Benoit: paragraph [0045] and Fig. 9, 904; Note specifically "execute automatically at a frequency set by the user". Surely there is some means to receive a user selection is the user uses the interface menu to 'set' a schedule of execution of a query.);

storing a schedule for the unit of work on the basis of the user selection (Benoit: paragraph [0045], lines 1-3); and

repetitively executing the unit of work on the basis of the schedule (Benoit: paragraph [0016], lines 3-5).

Claim 7:

The combination of Rubert and Benoit discloses all the elements of claim 1, as noted above, and Rubert further discloses determining the cost to execute the unit of work comprises estimating a time required to execute the unit of work (Rubert: column 14, lines 4-14; A high-impact query is a query with a high cost. One means of determining a high cost is amount of time it takes a query to run. Furthermore it is important to note the Applicant admitted that the estimation of the cost of a query is 'well-known' in the art in paragraph [0034] of the Applicant's Specification.).

Claim 8:

The combination of Rubert and Benoit discloses all the elements of claim 1, as noted above, and Rubert further discloses wherein determining the cost to execute the unit of work is done on the basis of historical query execution times for previous executions of the unit of work (Rubert: column 14, lines 4-14; Note specifically that the Rubert reference analyzes the 'empirical timing' of queries. The 'empirical timing' is an analysis of historical time values.).

Claim 9:

The combination of Rubert and Benoit discloses all the elements of claim 1, as note above, and Benoit further discloses wherein determining the plurality of user-selectable scheduling options selecting a subset of user-selectable scheduling options from a predefined set of user-selectable scheduling options (Benoit: paragraph [0045] and Fig. 9, 904; When the user selects a scheduling option in the Benoit reference, the user clearly selects a subset (at least one) from a menu full of user-selectable scheduling options.).

Claim 10:

The combination of Rubert and Benoit discloses all the elements of claim 1, as noted above, and Rubert further discloses:

determining user parameters specific to the user (Rubert: column 4, lines 8-19); and

determining the plurality of scheduling options for future execution of the unit of work on the basis of the cost and the user parameters (Rubert: column 4, lines 8-19 and column 10, lines 57-67; The user parameters are considered at the beginning of the query scheduling process.).

Rubert does not explicitly disclose wherein the query scheduling options are user-selectable. However, Benoit discloses wherein the query scheduling options are user-selectable (Benoit: paragraph [0016], lines 3-5 and paragraph [0045] and Fig. 9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Rubert with the teachings of Benoit noted above. The skilled artisan would have been motivated to improve the teachings of Rubert per the above such that a user interface provides the user with flexibility to set saved queries to execute at a scheduled time interval (Benoit: paragraph [0016], lines 1-5 and Fig. 9).

Claim 11:

The combination of Rupert and Benoit discloses all the elements of claim 10, as noted above, and Rupert further discloses wherein the user parameters include at least one of a user status of the user and other units of work already scheduled for execution by the user (Rubert: column 4, lines 8-19 and column 10, lines 57-67; The first reference considers the users status when the system determines is the user has access to a certain database. And the second reference clearly shows that the system considers the units of work (queries) that are already scheduled.).

Claim 12:

A computer-implemented method for scheduling units of work, comprising:

determining a cost to execute a unit of work (Rubert: column 14, lines 4-14; The Rubert reference clearly shows determining if a query is a 'high-impact query'. This involves calculating the 'cost' of a query. Furthermore it should be known for the record that the Applicant clearly stated that determining the 'cost' of a query is well known in the art in paragraph [0034] of the Applicant's specification.);

determining a system availability to execute the unit of work (Rubert: column 14, lines 4-14 and column 2, lines 26-36);

determining a plurality of scheduling options for future execution of the unit of work on the basis of the cost and system availability (Rubert: column 10, lines 57-67 and column 2, lines 26-36; Note particularly that future scheduling is based on how high the cost (high impact = high cost) of a query is.).

Rubert does not explicitly disclose wherein the query scheduling options are user-selectable; and returning the plurality of user-selectable scheduling options to a user interface for display to a user. However, Benoit discloses wherein the query scheduling options are user-selectable (Benoit: paragraph [0016], lines 3-5 and paragraph [0045] and Fig. 9); and returning the plurality of user-selectable scheduling options to a user interface for display to a user (Benoit: Fig. 9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Rubert with the teachings of Benoit noted above. The skilled artisan would have been motivated to improve the teachings of Rubert per the above such that a user interface provides the user with flexibility to set saved queries to execute at a scheduled time interval (Benoit: paragraph [0016], lines 1-5 and Fig. 9).

Claim 13:

The combination of Rubert and Benoit discloses all the elements of claim 12, as noted above, and Rubert further discloses wherein determining system availability to execute the unit of work comprises accessing a query schedule having entries defined

for a plurality of different units of work (Rubert: column 4, lines 4-7 and column 14, lines 4-14 and column 2, lines 26-36; Surely if the system executes a scheduled query, the system accesses a query schedule.).

Claim 14:

The combination of Rubert and Benoit discloses all the elements of claim 12, as noted above, and Benoit further discloses:

receiving a user selection from the plurality of user selectable scheduling options (Benoit: paragraph [0045] and Fig. 9, 904; Note specifically "execute automatically at a frequency set by the user". Surely there is some means to receive a user selection is the user uses the interface menu to 'set' a schedule of execution of a query.);

storing a schedule for the unit of work on the basis of the user selection (Benoit: paragraph [0045], lines 1-3); and

repetitively executing the unit of work on the basis of the schedule (Benoit: paragraph [0016], lines 3-5).

Claim 15:

The combination of Rubert and Benoit discloses all the elements of claim 12, as noted above, and Rubert further discloses wherein determining the cost to execute the unit of work comprises estimating a time required to execute the unit of work (Rubert: column 14, lines 4-14; A high-impact query is a query with a high cost. One means of determining a high cost is amount of time it takes a query to run. Furthermore it is important to note the Applicant admitted that the estimation of the cost of a query is 'well-known' in the art in paragraph [0034] of the Applicant's Specification.).

Claim 16:

The combination of Rubert and Benoit discloses all the elements of claim 12, as noted above, and Rubert further discloses wherein determining the cost to execute the unit of work is done on the basis of historical query execution times for previous executions of the unit of work (Rubert: column 14, lines 4-14; Note specifically that the Rubert reference analyzes the 'empirical timing' of queries. The 'empirical timing' is an analysis of historical time values.).

Claim 17:

The combination of Rubert and Benoit discloses all the elements of claim 12, as noted above, and Benoit further discloses wherein determining the plurality of user-selectable scheduling options selecting a subset of user-selectable scheduling options from a predefined set of user-selectable scheduling options (Benoit: paragraph [0045] and Fig. 9, 904; When the user selects a scheduling option in the Benoit reference, the user clearly selects a subset (at least one) from a menu full of user-selectable scheduling options.)

Claim 18:

Rubert discloses a computer readable medium containing a program which, when executed, performs an operation for scheduling execution of units of work, the operation comprising:

determining a cost to execute a unit of work (Rubert: column 14, lines 4-14; The Rubert reference clearly shows determining if a query is a 'high-impact query'. This involves calculating the 'cost' of a query. Furthermore it should be known for the record that the Applicant clearly stated that determining the 'cost' of a query is well known in the art in paragraph [0034] of the Applicant's specification.);

determining a plurality of scheduling options for future execution of the unit of work on the basis of the cost (Rubert: column 10, lines 57-67; Note particularly that future scheduling is based on how high the cost (high impact = high cost) of a query is.).

Rubert does not explicitly disclose wherein the query scheduling options are user-selectable; and returning the plurality of user-selectable scheduling options to a user interface for display to a user. However, Benoit discloses wherein the query scheduling options are user-selectable (Benoit: paragraph [0016], lines 3-5 and paragraph [0045] and Fig. 9); and returning the plurality of user-selectable scheduling options to a user interface for display to a user (Benoit: Fig. 9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Rubert with the teachings of Benoit noted above. The skilled artisan would have been motivated to improve the teachings of Rubert per the above such that a user interface provides the user with flexibility to set saved queries to execute at a scheduled time interval (Benoit: paragraph [0016], lines 1-5 and Fig. 9).

Claim 19:

The combination of Rubert and Benoit discloses all the elements of claim 18, as noted above, and Rubert further discloses:

determining system availability to execute the unit of work (Rubert: column 14, lines 4-14 and column 2, lines 26-36); and

determining a plurality of scheduling options for future execution of the unit of work on the basis of the cost and system availability (Rubert: column 10, lines 57-67 and

column 2, lines 26-36; Note particularly that future scheduling is based on how high the cost (high impact = high cost) of a query is.).

Rubert does not explicitly disclose wherein the query scheduling options are user-selectable. However, Benoit discloses wherein the query scheduling options are user-selectable (Benoit: paragraph [0016], lines 3-5 and paragraph [0045] and Fig. 9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Rubert with the teachings of Benoit noted above. The skilled artisan would have been motivated to improve the teachings of Rubert per the above such that a user interface provides the user with flexibility to set saved queries to execute at a scheduled time interval (Benoit: paragraph [0016], lines 1-5 and Fig. 9).

Claim 20:

The combination of Rubert and Benoit discloses all the elements of claim 18, as noted above, and Benoit further discloses displaying the returned plurality of user-selectable scheduling options to user via a menu in the user interface (Benoit: Fig. 9, 904).

Claim 21:

Claim 21 is rejected under the same reasons set forth in the rejection of claims 10 and 11.

Claim 22:

Claim 22 is rejected under the same reasons set forth in the rejection of claim 5.

Claim 23:

Claim 23 is rejected under the same reasons set forth in the rejection of claim 6.

Claim 24:

Claim 24 is rejected under the same reasons set forth in the rejection of claim 7.

Claim 25:

Claim 25 is rejected under the same reasons set forth in the rejection of claim 8.

Claim 26:

Claim 26 is rejected under the same reasons set forth in the rejection of claim 9.

Claim 27:

Rubert discloses a computer system, comprising:

a schedule indicating when units of work are to be executed (Rubert: column 10, lines 57-67);

a scheduler configured to:

determine a cost to execute a unit of work (Rubert: column 14, lines 4-14; The Rubert reference clearly shows determining if a query is a 'high-impact query'. This involves calculating the 'cost' of a query. Furthermore it should be known for the record that the Applicant clearly stated that determining the 'cost' of a query is well known in the art in paragraph [0034] of the Applicant's specification.);

determine a plurality of scheduling options for repetitive execution of the unit of work on the basis of the cost (Rubert: column 2, lines 14-18 and column 10, lines 57-67; The first reference clearly shows that Rubert suggests scheduling queries so that they can run repetitively. The second reference clearly shows that future scheduling is based on how high the cost (high impact = high cost) of a query is.).

Rubert does not explicitly disclose wherein the query scheduling options are user-selectable; and returning the plurality of user-selectable scheduling unit of work to

a user interface for display to a user. However, Benoit discloses wherein the query scheduling options are user-selectable (Benoit: paragraph [0016], lines 3-5 and paragraph [0045] and Fig. 9); and returning the plurality of user-selectable unit of work to a user interface for display to a user (Benoit: Fig. 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Rubert with the teachings of Benoit noted above. The skilled artisan would have been motivated to improve the teachings of Rubert per the above such that a user interface provides the user with flexibility to set saved queries to execute at a scheduled time interval (Benoit: paragraph [0016], lines 1-5 and Fig. 9).

Claim 28:

The combination of Rubert and Benoit discloses all the elements of claim 27, as noted above, and Rupert further discloses a database against which the units of work are executed (Rubert: column 2, lines 57-64).

Claim 29:

The combination of Rubert and Benoit discloses all the elements of claim 27, as noted above, and Rubert further discloses wherein the unit of work is query (Rubert: column 2, lines 57-64).

Claim 30:

The combination of Rubert and Benoit discloses all the elements of claim 27, as noted above, and Rubert further discloses wherein the unit of work is an analysis routine (Rubert: column 2, lines 57-67; A query is an analysis routine. The Applicant clearly defines an

analysis routing in paragraph [0026], lines 29-32 of the Applicant's Specification. This definition states that an analysis routine is "any unit of work performed with respect to the data in the database". Surely a query is a unit of work performed with respect to the data in the database.).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick A. Darno whose telephone number is (571) 272-0788. The examiner can normally be reached on Monday - Friday, 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Patrick A. Darno
Examiner
Art Unit 2163

PD

UYEN LE
PRIMARY EXAMINER